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*Northwest Thailand: Geographic Factors Affecting the Illicit
Movement of Opium from Burma's Shan State*

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Northwest Thailand: Geographic Factors Affecting the Illicit Movement of Opium from Burma's Shan State

SUMMARY

Northwest Thailand is a sparsely populated area of extremely rugged terrain served by a primitive system of roads and trails. Many of its people belong to the hill tribes who have migrated from the rich poppy-growing country of Burma's Shan State, contiguous to the north. Opium armies have flourished here and in other parts of the Burma-Thailand-Laos "Golden Triangle" for more than two decades.

Illicit movement of narcotics into Northwest Thailand from Burma continues despite crackdowns on opium trafficking by the governments of the three "Golden Triangle" countries. If the enforcement agencies of the Thai Government (RTG) plug the major smuggling avenues through Thailand's northwestern border area, the traffickers may increasingly use routes across the Mekong River into Laos or remote passes into Thailand farther west. Moreover, if leaders of the Chinese Irregular Forces (CIF, formerly called the KMT) keep their promises to get out of the opium business, smuggling routes need no longer be focused on their headquarters at Mae Salong and Tham Ngop. Recent intelligence reports claim that opium caravans from the Shan State have indeed been shifting their cross-border routes westward, increasingly using trails through Mae Hong Son Province.

Geographic factors largely determine how, where, and when opium is moved from Shan State poppy fields to transshipment camps in Northwest Thailand. Geography also affects RTG efforts to interdict the opium traffic. Rugged terrain has retarded the construction of all-weather roads in the region and necessitated the continued use of horses and mules to carry illicit cargoes along mountain trails across the Burma-Thailand frontier. The pack trains cross the border through one of the few lowland passages or, increasingly, through remote mountain passes. The trails traverse varied vegetation: in places they are totally hidden from aerial detection by dense canopies of tropical evergreen forests, elsewhere they are partly obscured by more open deciduous forests, and in still other places they are completely exposed as they cross denuded grassy slopes. While in most areas pack trains of several hundred animals could be readily detected, small pack trains would be difficult for RTG interdiction personnel to spot from helicopters or small planes. Most opium is moved from the fields to the transshipment points during the dry season; slippery trails limit the amount of opium that can be moved during the wet months.

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THE NATURAL ENVIRONMENT

1. Northwest Thailand, encompassing most of Mae Hong Son and Chiang Mai Provinces and the western third of Chiang Rai Province, is ideal smuggling territory. (See fold-out map, following text.) Its mountainous terrain, the most rugged in the country, has retarded the extension of all-weather roads into the region, discouraged large-scale settlement by the lowland Thais, and minimized the presence of RTC officials. Trails, used by pack animals undaunted by the difficult terrain, crisscross the region and connect through lowland passages and mountain passes with the poppy fields of Burma's Shan State.

2. Terrain is like that of the Appalachian region of the United States, dominated by north-south ridges and valleys. Slopes are steep, ridges are broken by few passes, valleys are rarely more than a few miles wide, and streams are deeply incised and treacherous (Figure 1). Ridge crests lie at elevations between 3,000 and 5,000 feet, and valley bottoms between 1,000 and 1,500 feet. Peaks may rise well above the ridges: Doi Inthanon, about 35 miles southwest of Chiang Mai and the highest peak in Thailand, towers

to more than 8,500 feet above sea level. Breaking the general ridge-and-valley pattern are extensive blocks of rugged mountains unbroken by valleys, especially in northern Mae Hong Son Province (Figure 2).

3. The lowlands along the valleys of the northward-flowing Nam Mae (River) Fang and the southward-flowing Nam Mae Ping are up to 15 miles wide and contain the major cities of Northwest Thailand—Chiang Mai (the second largest in the country), Fang, and Chiang Dao—as well as a ribbon of smaller towns and villages strung along the highway that extends from Chiang Mai to Thu Ton. Fields of wetland rice and a sprinkling of other crops blanket the land between the highway and the foothills on either side (Figure 3). In the vast block of territory between the Ping Valley and the Thai-Burma border, lowlands are narrow and isolated. No more than 3 to 4 miles wide, they may extend in discontinuous stretches for several miles along the major streams of the region—the Nam Mae Taeng, the Nam Mae Pai, and the Nam Mae Yuam. The largest towns—Mae Hong Son, Mae Sariang, and Pai—are situated in these valleys.



FIGURE 1. Mountains of Northwest Thailand. Slopes are steep and valleys narrow. All traffic, even porters and pack animals, is channeled along ridges or through valleys.

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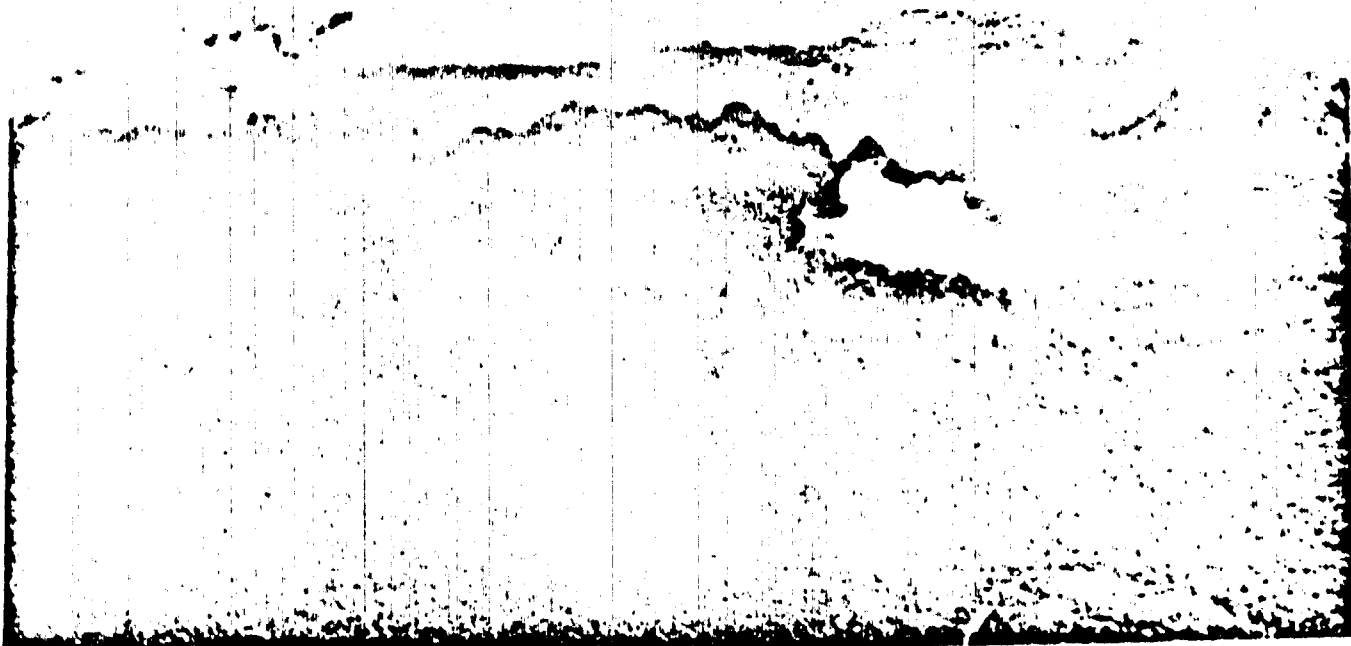


FIGURE 2. Karst landscape. Craggy, densely forested, and lightly peopled limestone terrain is scattered throughout Northwest Thailand. While such terrain impedes movement, soils derived from limestone are ideally suited for poppy cultivation. Low-lying clouds restrict aerial observation during much of the rainy season.

4. The alignment of terrain features north-south and the paucity of passes through the ridges have channeled most transportation arteries in a north-south direction. Only one good road crosses the mountains, linking Mae Hong Son Province with the rest of the country. Even the major trails, which are usually aligned along ridges or river valleys, rarely cut across the grain of the terrain.

5. The terrain along the border between Northwest Thailand and Burma is also rugged, broken in only a few places by lowland passages. These passages are used as border crossing routes by villagers living in the frontier areas of both Burma and Thailand. An extensive paddy-covered lowland at the extreme northern part of the border, centered on the towns of Tachilek and Mae Sai, serves as the major communication corridor between the two countries. A good road leads southward from Mae Sai through Chiang Rai to Bangkok and a fair road northwestward from Tachilek to Kung Tung and other points in Burma.

6. Forty miles to the southwest of Mae Sai, the deeply incised valley of the Nam Mae Kok forms another passage through the rugged and lightly populated border terrain. General Tuan Hsi-wen's Fifth Chinese Irregular Forces (CIF) complex at Mae Salong, in the mountains to the east of the Nam Mae

Kok, has served as a major storage and transshipment point for Shan State opium (Figure 4).

7. A third major break in the border mountains occurs about 35 miles southwest of the Nam Mae Kok crossing. This corridor is broader than the one formed by the Nam Mae Kok—up to about 8 miles wide—and is rolling, heavily forested, and largely uninhabited. A trail extends from Burma through the corridor into Thailand and intersects with the Fang-Chiang Mai highway about 25 miles south of Fang. The trail is difficult to discern from the air through the exceptionally dense leaf canopy of the forest in the corridor. Rounded limestone hills, probably honeycombed with caves that could be used to cache illicit cargoes being smuggled across the border, flank the passage. General Li Wen-huan's Third CIF Army and the Kachin Independence Army's Office of Kachin Foreign Affairs (KIA/OKFA), as well as several other Shan State insurgent forces, have camps in the Tham Ngop area, on the eastern side of the passage (Figure 5). The camps have served as transshipment and storage sites for opium from the Shan State.

8. The block of border mountains between this lowland and the point where the border turns southward near 19°45'N, 98°00'E is unbroken by a lowland gap. Several border passes at elevations

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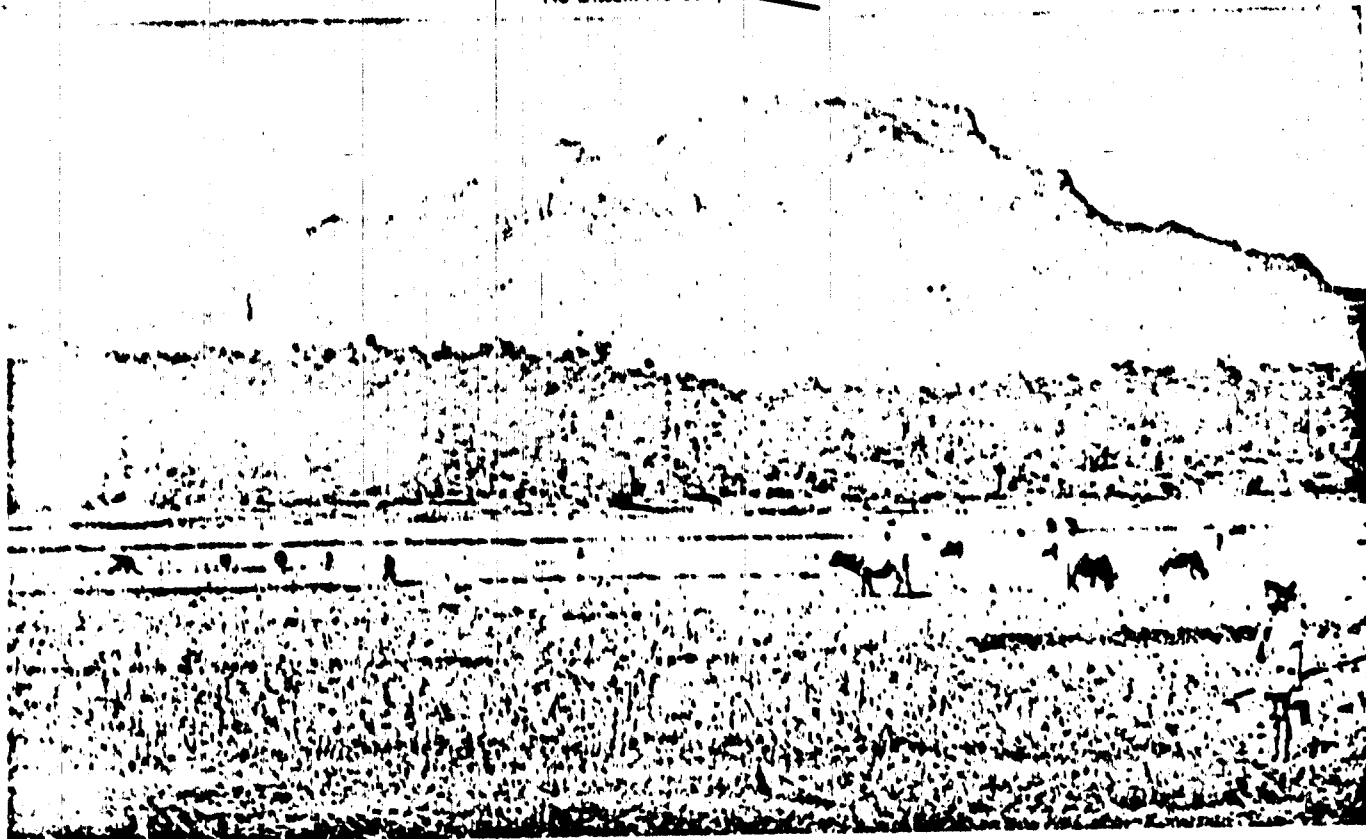


FIGURE 3. The Ping Valley near Chiang Dao. This intensively cultivated valley, the broadest in Northwest Thailand, contains many of the major towns of the region; other valleys are narrow and less developed. Caves in the limestone mountains in the background could be used to store opium.

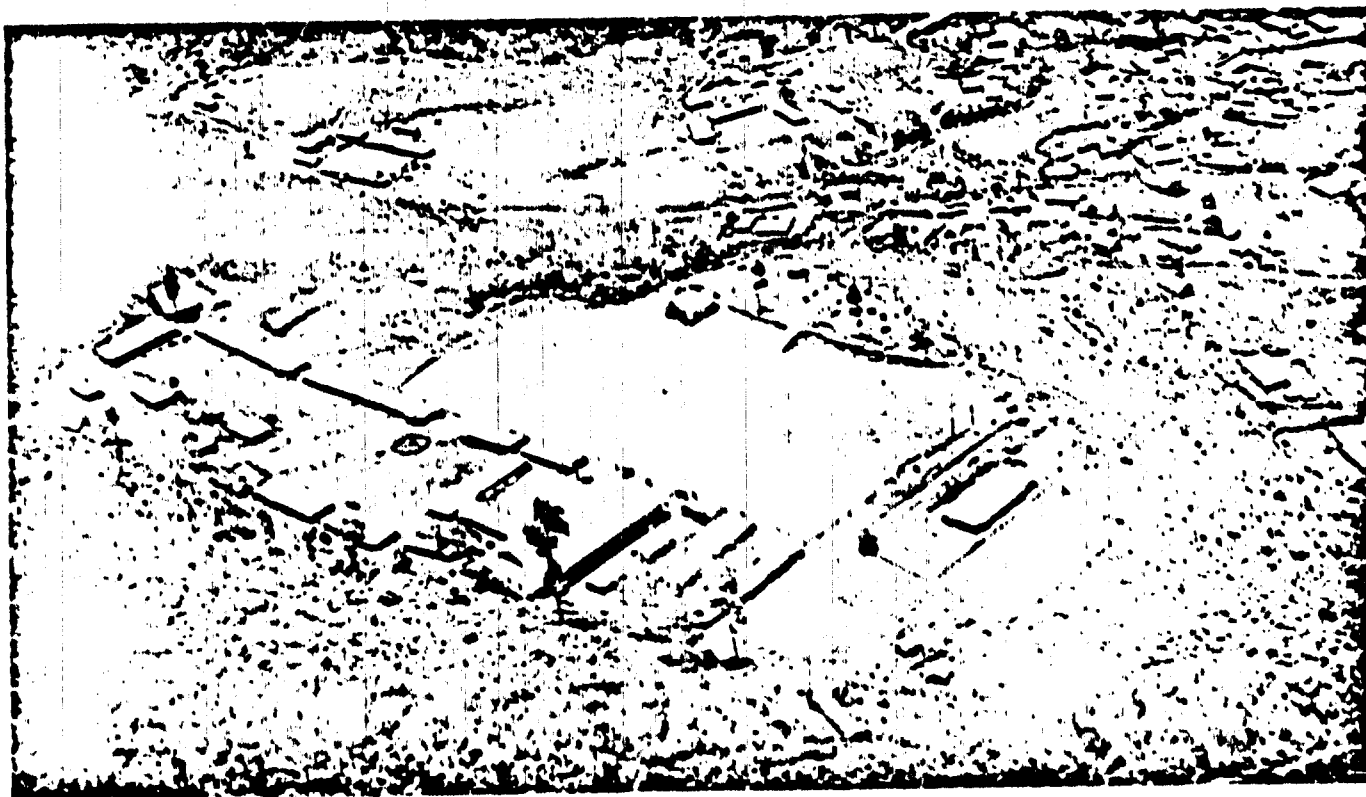


FIGURE 4. Part of the CIF Fifth Army Headquarters at Mae Salong. Large buildings in the foreground border a drill field.

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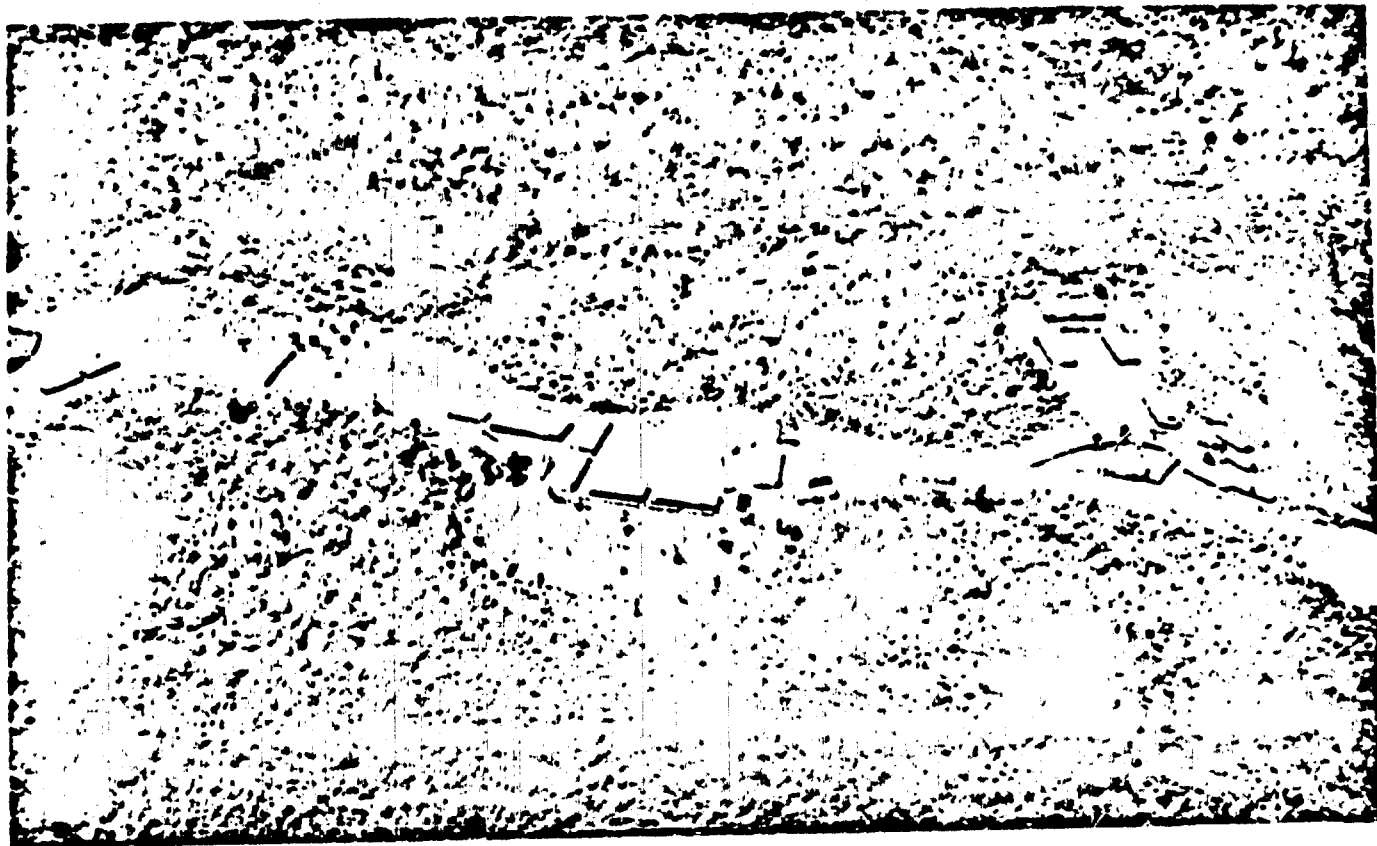


FIGURE 5. Part of the CTF Third Army Headquarters near Tham Ngop. A number of Shan State insurgent groups also maintain camps in the Tham Ngop area, all of which have been transshipment points for Shan State opium.

between 2,000 and 3,000 feet, however, are crossed by trails. (See fold-out block diagram, following text.) Already used by some opium pack trains from Burma, these passes are likely to receive heavier use by such caravans if the major lowland passages to the east are blocked by RTG enforcement units. Border terrain to the southwest of 19°45'N, 98°00'E comprises a complex system of low mountains with a number of passes providing cross-border links. The Pail River flows westward to the Salween and provides the major communications corridor between Mae Hong Son Province and Burma.

9. In much of Northwest Thailand the vegetation obscures to varying degrees opium-laden pack trains from aerial view. Broadleaf forests with both evergreen and deciduous trees blanket most of the region except for the broader valley floors that are under cultivation and those higher ridges that are in grasslands or open coniferous and oak forest. Deciduous trees—including commercially exploited teak—prevail in drier tracts, particularly on leeward slopes (Figure 6); evergreens predominate in wetter areas such as those along streams and on windward,



FIGURE 6. Deciduous forest. Trees in such stands, commonest on leeward slopes, lose their leaves for several weeks during the dry season. Concealment from aerial observation is limited.

rain-swept slopes (Figure 7). Logging and slash-and-burn farming of rice, maize, and popples have cleared vast areas of their original cover; abandoned fields in various stages of regrowth pockmark the forested slopes (Figure 8). Tall stands of virgin forest are restricted to remote tracts.

10. Trails are easily detectable from the air only where they traverse land cleared for cultivation, grasslands or relatively open forests on the ridges, or, from January to April, leafless deciduous forests. Trails may be completely hidden from air observation for miles where they pass under the unbroken canopies of dense evergreen stands.

11. The wet season - dry season cycle that controls the agricultural rhythms of the Thai farmer also plays a role in the movement of opium caravans and in RTG interdiction operations. The wet season for the region starts in May or early June and continues into October. Although three-quarters or more of the annual precipitation falls during this five-month period and rain may be heavy and prolonged, showers may fall at any time of the year (see table). A marked disparity in rainfall usually occurs between windward (south- and west-facing) and leeward (north- and east-facing) slopes; rain may be heavy on a windward slope while a leeward slope only a few miles away is cloud-free. Trails are consequently more often aligned along the leeward side of ridges.

12. Traffic on trails and secondary roads may be slowed or halted for extended periods during the rainy season by mud, landslides, earth slumps, fallen trees, or by high water in fords. Flash floods, which occur in constricted valleys during heavy rains, sometimes inundate trails for a day or more. Swollen waters, on the other hand, improve the navigability of major streams during much of the rainy season, and these streams may serve as alternate routes to replace unusable roads or trails.

13. Opium poppies are planted late in the rainy season, from August to early October, and harvested from January to March. Pack trains from the insurgent bases in Northwest Thailand usually start to move northward into the Shan State early in the dry season, in November or December, and most of the Shan State crop is moved from the growing areas to entrepôts such as Tachilek, Mae Salong, or Tham Ngop before the rains start in May or June. Raw opium can be stored indefinitely without spoilage, however, and fluctuation in prices and the presence of interdiction units along the smuggling routes may create delays. Movement of the caravans to the Shan State growing areas and back to the transshipment points in Thailand may therefore occur at any time of the year. The pace is slowed during the rainy season, and the load borne by a single horse or mule is reduced from 125-150 pounds to about 90 pounds so that the animal can more effectively cope with slippery trail conditions.

14. Clouds, mist, fog, and haze, while not interfering significantly with the movement of opium caravans, do at times obscure them from detection by aerial reconnaissance. The cloud ceiling is lowest in the morning, when valleys and lower slopes are often blanketed, but usually lifts to well above the ridges later in the day. During much of the rainy season, however, mountain ridges—along which segments of the caravan routes are aligned—may remain shrouded in clouds all day. Cloud cover, like rainfall, is greatest on windward slopes, least on leeward slopes. While cloudiness is minimal during the dry season, fog and haze may be particularly intense at this time of year. Fog commonly occurs in valley bottoms in the early morning during the dry season while haze—caused by fires set by farmers in the valleys and on the slopes—further reduces air-to-ground visibility during the entire day.

MEAN PRECIPITATION

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Chiang Mai .....	.3	.3	.6	1.9	5.9	5.5	6.7	8.8	10.6	5.5	1.6	.5	48.2
Fang .....	.3	.4	.9	1.9	8.2	8.9	8.6	14.2	9.0	3.7	.8	.1	57.0
Hot .....	.2	1.0	1.5	2.0	5.8	6.9	5.4	6.4	11.3	6.7	1.3	.0	48.5
Mae Sariang .....	.2	.2	.3	1.9	5.5	8.6	8.0	10.4	8.4	3.7	1.1	.6	48.9
Pai .....	.0	.1	.9	1.4	7.3	5.8	5.7	10.1	8.7	4.5	.6	.0	45.1

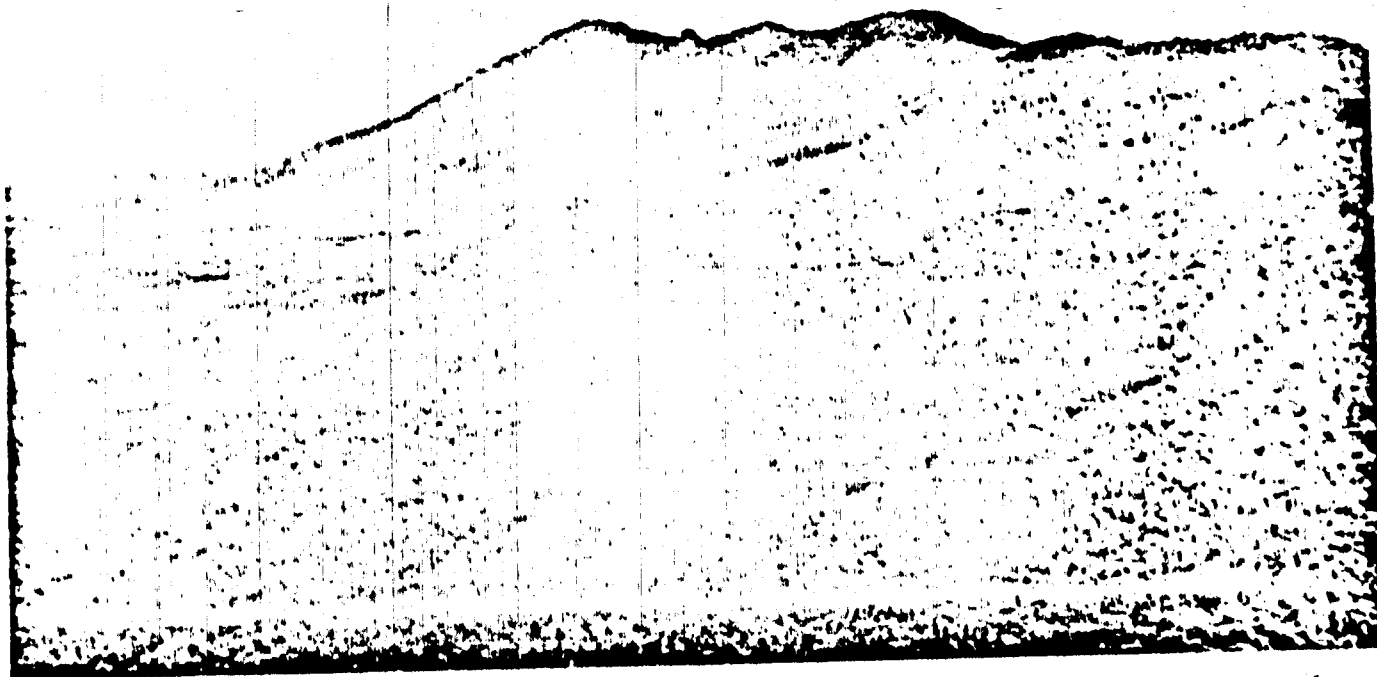


FIGURE 7. Ridge north of Chiang Mai. Windward slopes are usually blanketed by densely canopied evergreen forests which hide the trails.



FIGURE 8. Cut-over slopes. Persistent slash-and-burn farming of rice, maize, and poppies has denuded vast areas of trees. Pack trains moving across these barren hills have little concealment from air observation.

THE TRANSPORTATION SYSTEM

15. The transportation network of Northwest Thailand is the least developed in the country. Despite a crash Thai Government road-building program to connect towns and villages in remote border areas with the main highways, most villages and many of the small towns remain reachable by automobile only in the dry season at best.¹ Larger towns such as Mae Hong Son and Pai, for example, are linked with the rest of the country during much of the rainy season by miry roads usable only by pack animals and animal-drawn carts. Even on newly constructed roads travel by automobile may be treacherous during heavy rains, especially in mountainous sections. A dense network of trails, used by pack animals, remains the key element of the transportation system. Although their trafficability is reduced by slickened surfaces during much of the rainy season, trails are used year round. Most rivers in the region are shallow and turbulent and of limited use for navigation. A few—notably the Ping, the Kok, the Pai, and the Yuam—are seasonally navigable by small craft for much of their lengths and locally supplement the roads and trails.

Roads

16. There are only three major paved all-weather roads: Route 1, the country's principal north-south highway, which extends from the border at Mae Sai through Chiang Rai and Lampang to Bangkok; the Fang - Chiang Mai highway, which connects with Route 1 at Lampang;² and the newly constructed road between Chiang Mai and Mae Sariang. Even these roads, although well constructed with good drainage and well-engineered roadbeds, shoulders, and bridges, may be subject to traffic interruptions during exceptionally heavy rains. The first two roads traverse gentle grades through paddy-covered valleys for much of their lengths, but the Chiang Mai - Mae Sariang road bucks the grain of the terrain, ascending and descending fairly steep slopes.

17. Primary roads are little traveled by pack trains, least of all by those carrying opium. Such caravans

¹ Poppy-growing hill tribesmen in the Northwest have resented the intrusion of the new roads because they expose illicit cultivation and trade.

² The segment extending north of Fang to the border town of Tha Ton, graveled and all-weather, is now being paved.

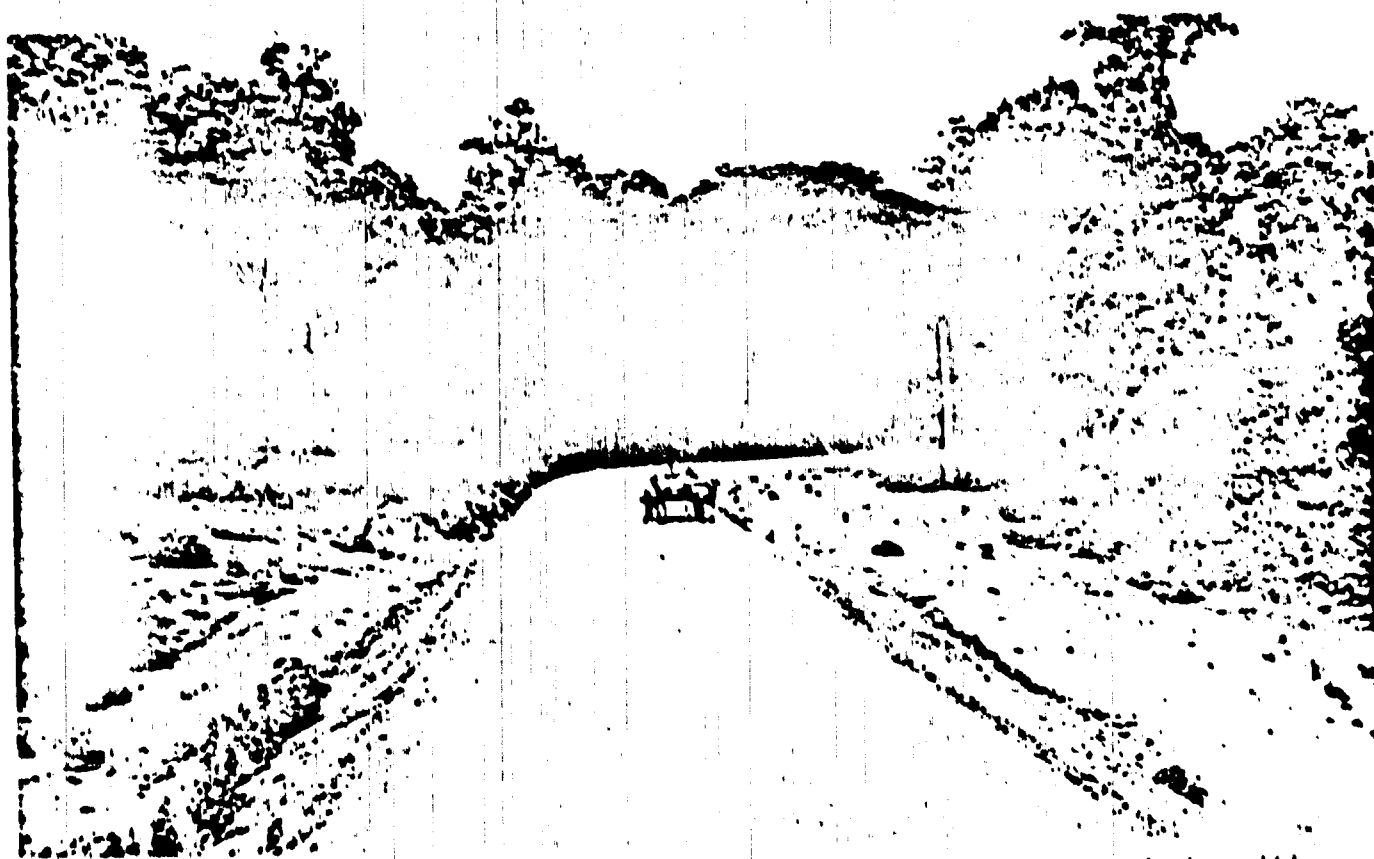


FIGURE 9. Typical soft-surfaced all-weather road. The lone cart will be joined by a multitude of other vehicles near the towns and villages. Despite its all-weather classification, this road may be unusable by most motor vehicles during exceptionally heavy rains.

transfer their illicit cargoes to motor vehicles either at roadheads several miles from the main highway or at remote and well-hidden sites along the main roads. Both Route 1 and the Chiang Mai - Fang highway have been important routes for narcotics-laden motor vehicles en route to Bangkok. The Chiang Mai - Mae Sariang road, on the other hand, has had no such reputation. If RTG interdiction pressures are effective in the Mae Sai and Fang areas, however, Shan State opium smuggled into Mae Hong Son Province as well as opium harvested in the province could be channeled to Bangkok along this road. But because traffic on it is light, a checkpoint established near Ban Tha Kham Kua would be a deterrent to its use by smugglers.

18. A few secondary roads, such as the one linking Mae Sai with Route 1 south of Chiang Rai, are surfaced with gravel, crushed stone, or laterite and are closed only during exceptionally heavy rains (Figure 9). Most secondary roads are fair-weather, however, and even during the dry season are usable by standard automobiles only with difficulty (Figure 10). Many are impassable even by jeeps during wet weather when they become ribbons of deeply rutted mud. Pack animals and animal-drawn carts, some carrying illicit cargoes, form the major part of the year-round traffic on most secondary roads. Motorcycles and motor scooters, able to traverse roads that are too muddy to be used by larger motor vehicles, also make short-distance runs.

19. Mae Hong Son has always been one of the most isolated provinces in Thailand. Until the past 10 to 20 years, there was as much travel and trade between the province and Burma as between it and Thai territory to the east and south. The Pai River was a more important avenue to the outside world than any of the trails leading to the rest of Thailand. The Japanese built roads from Chiang Mai into Mae Hong Son during World War II, but they fell into disuse soon after the war. Now, however, the all-weather road between Chiang Mai and Mae Sariang, aligned along an old caravan trail, provides good communications for the southern part of the province, and construction of an all-weather road from Mae Sariang north to Mae Hong Son is underway. The southern half of the latter road, between Mae Sariang and Khun Yuam, has been graded and surfaced. It is, however, in poor repair and usable only by four-wheel drive vehicles during much of the rainy season. North of Khun Yuam, the road is ungraded and unsurfaced; it is no better than a motorable track in some northern



FIGURE 10. Fair-weather road during the dry season. In the rainy season this road becomes muddy and impassable for most motor vehicles.

sections and may be impassable by any motor vehicle for weeks at a time during wet weather.

20. The only road in the northern part of the province leads from Mae Hong Son through Pai to the Fang - Chiang Mai highway at Mae Malai. Initially constructed by the Japanese in World War II, its extremely rugged western section between Mae Hong Son and Pai is now only a fair-weather track for four-wheel drive vehicles. Even under favorable weather conditions, such vehicles would require more than 2 days to traverse this 75-mile section. East of Pai the road, although only dirt surfaced and containing many curves and switchbacks, is in better condition and probably negotiable for its entire length by heavy-duty automobiles during dry weather (Figure 11). It has been an avenue for opium-laden pack trains both from Burma and from the poppy-growing area of northern Mae Hong Son Province. The pack trains have transferred their loads to motor vehicles in the eastern 20-mile section of the road, which remains trafficable during most of the year.

21. A fair-weather road that taps the poppy-growing mountains north of Doi Inthanon may be used by caravans of porters or pack animals to carry the local crop to market. It connects the Ban Duet tin mine, about 17 miles north of Doi Inthanon, with Mae Rim, about 30 miles to the east on the Fang - Chiang Mai road. Another fair-weather road connects Mae Chuem, in a small valley about 10 miles southwest of Doi Inthanon, with the Chiang Mai - Mae Sariang road, intersecting the latter about 12

miles west of Ban Thu Kham Kua. The Karen hills flanking the valley are not known as a major poppy-cultivating region, however, and the road is probably little used as an opium route.

22. Two short fair-weather roads that branch off the main north-south highways are of special interest in narcotics interdiction operations. One leads westward from the Fang - Chiang Mai highway for a few miles toward the insurgent camps near Tham Ngup; the other extends westward from Route 1 for several miles toward the Fifth CIB Army's Mae Salong headquarters.

Trails

23. Northwest Thailand's dense network of trails plays a key role in both the legitimate movement of people and goods between villages and towns of the region and the illicit smuggling of opium across the Burma-Thai frontier. Although the trails crisscross

valleys, slopes, and ridges in seemingly random patterns, some general rules govern their alignments. Trails connect neighboring villages. Dead-end trails link the villages with their fields, which may be several miles away (Figure 12). Trails lead from hill villages to towns in the valleys, often widening into fair-weather roads on the lower slopes before the town is reached. Many slopes are steep and trails must switchback a number of times. Despite the switchbacks, movement on the slopes, even by sure-footed pack animals, remains treacherous. Trails are often aligned along ridgelines for long distances because vegetation atop the ridges is sparse and the terrain relatively gentle (Figures 13 and 14). Where ridges are markedly saw-toothed or otherwise difficult to traverse, trails descend into the valleys. Trails extend along all major river valleys of the region; vegetation in the valleys, however, is often dense, and when water level permits, trails may follow the stream bed for several miles (Figure 15).



FIGURE 11. Dirt road between Pai and Mai Mai. This road, used mostly by pack animals and animal-drawn carts and little by motor vehicles, winds through heavily forested mountains for most of its length.

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FIGURE 12. Trails radiating from a hill tribe village. Trails either dead-end at village fields or lead to other mountain villages or lowland towns.



FIGURE 13. Ridge-top trail. Crests are commonly lightly forested, and pack trains can move for miles unimpeded by vegetation.

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FIGURE 14. Mountain trail. When not aligned along crests, trails often traverse dry leeward slopes.



FIGURE 15. Trail through a narrow valley north of Mae Sariang. When water is low, valley trails frequently follow stream beds. Dense vegetation impedes movement elsewhere in the valleys.

24. Although most streams are fordable by porters or pack animals (Figure 16), major rivers such as the Nam Mae Kok frequently must be crossed on rafts or boats (Figure 17). During heavy rain rivers rise quickly, and deep water and swift currents may preclude the use of fords across even small streams. Once the rain stops, however, water level drops almost as rapidly as it rose, and travelers need wait no more than one or two days to make the crossing.

25. A variety of vehicles and animals use the trails of Northwest Thailand. Short trail segments in the lowlands and foothills are negotiable by motorcycles and motor scooters although otherwise little used by motor vehicles. Entrepreneurs with motorcycles provide shuttle service for passengers or limited amounts of cargo between villages along roads and the trafficable sections of the trails. Opium reportedly has been smuggled from the frontier area west of Fang to the Fang - Tha Ton road by convoys of motorcycles, but motorcycles do not in fact move a significant amount of cargo, licit or illicit, through the region.

26. Because of the paucity of all-weather roads, animals—water buffaloes, oxen, elephants, horses, and mules—are used more in Northwest Thailand to

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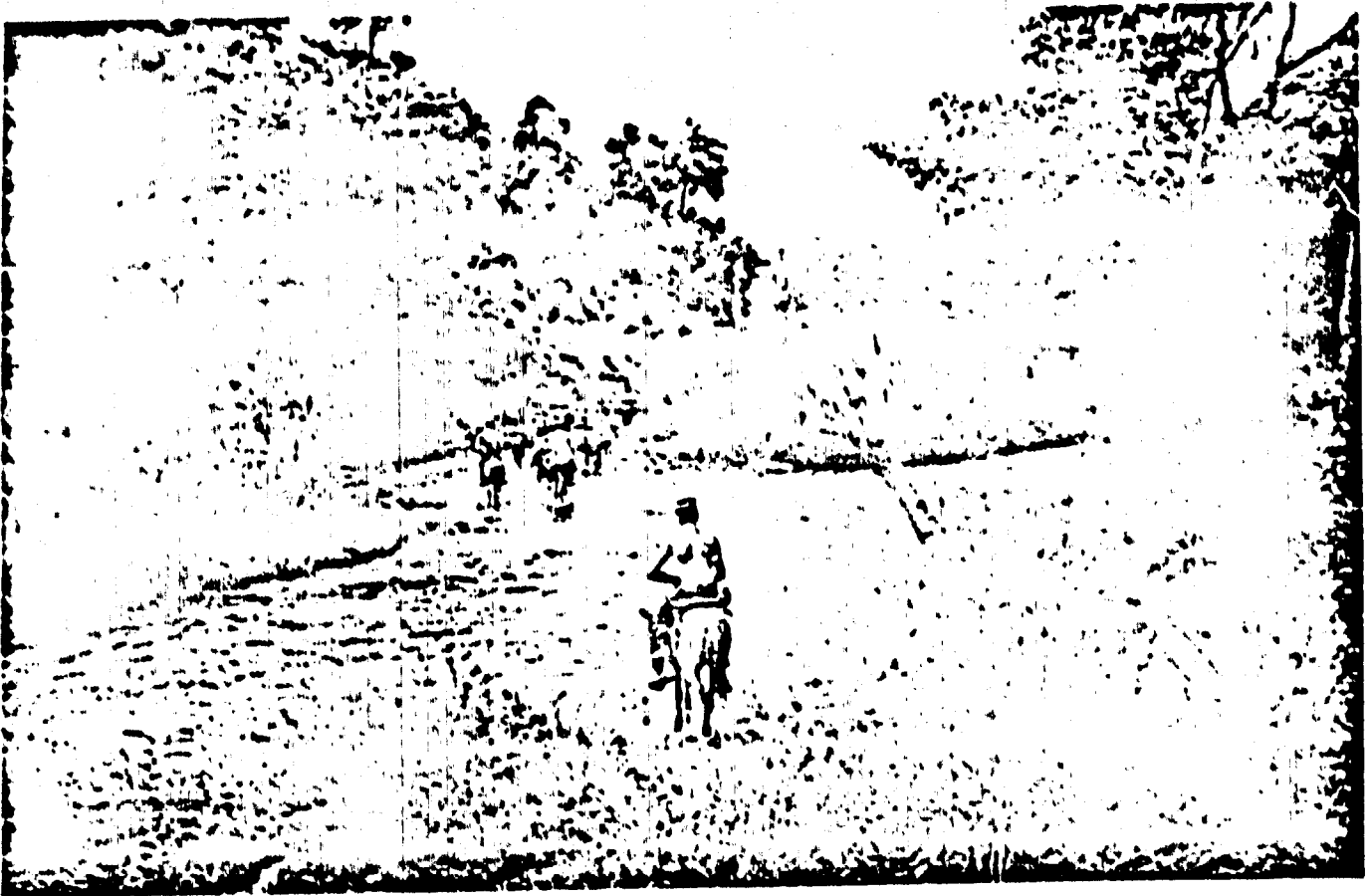


FIGURE 16. Stream crossing north of Mae Sariang. Pack animals can ford most streams easily except during heavy rains.



FIGURE 17. Makeshift bamboo ferry. Vessels such as this one must be used to cross both major and minor streams during high water.

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haul cargo than in any other part of the country. Carts pulled by two water buffaloes or oxen can carry up to 800 pounds of cargo (Figure 18). Although buffaloes are confined to gentle terrain, oxen can move along all but the more difficult mountain trails. Both can travel up to 18 miles a day. Oxen are also used as pack animals, often traveling in caravans. Each animal carries as much as 110 pounds. Caravans of oxen were the principal means of supplying Mae Hong Son Province before the construction of the Chiang Mai - Mae Sariang road. Elephants, in addition to being used in logging operations, are used as pack animals. They can travel up to 16 miles a day in rugged country with a maximum load of 600 pounds each.

27. Mules and small horses, each carrying between 125 and 150 pounds,³ travel in pack trains of as many as several hundred animals. They are the major movers of cargo, including opium, through the mountainous sections of the Burma-Thai frontier (Figure 19). These sure-footed animals, although not particularly fast, can negotiate even the steepest trails at all times of the year. An unhurried horse-and-mule pack train moves about 15 miles in a day, averaging about 2.5 miles per hour in level country and 2 miles per hour in mountainous terrain. Pack trains cannot move after sundown unless the night is unusually bright, the terrain level, and the trail good. Pack animals can travel for no more than 10 hours without substantial rest, and they require an additional day or two of rest after 10 days on the trail. At

³ Loads are reduced by as much as 60 pounds during long trips or wet weather.



FIGURE 18. Ox-drawn cart. Such vehicles, usable on the muddiest roads, carry much of the cargo in Northwest Thailand.

least one such rest is required, therefore, on journeys from deep in the Shan State to camps in Northwest Thailand. Most hill tribe villages own several dozen horses or mules which can be purchased by caravan leaders to supplement the caravan or to replace weary or injured animals. Pack trains for CIF opium procurement trips into the Shan State have been assembled at staging areas near the CIF camps in Northwest Thailand.

28. Porters, with loads up to 50 pounds on their backs, operate "pony express" style between the mountain villages of the region. They also move opium cargoes from domestic growing areas or storage sites to transshipment points when the distance is short. They travel at about the same speed as a horse-and-mule pack train.

Rivers

29. As far as is known, the rivers of Northwest Thailand have been little used by opium smugglers. Major streams are used at least seasonally, however, to move cargo and passengers and could also be used by opium traffickers to circumvent interdicted trails or roads.

30. For most of their lengths, the rivers flow through constricted valleys and have steep gradients with numerous rapids. Some stream sections, however, are navigable by rafts or other shallow-draft vessels. Since water levels are highest in the middle months of the rainy season when many secondary roads are impassable, some of the road traffic may be diverted to the streams. But water levels fluctuate considerably during the rainy season, and craft that can negotiate a segment of a stream with no difficulty one day may have to be poled or pulled through the same segment on the next.

31. The Nam Mae Sai, which forms the Burma-Thai border for about 10 miles, is a shallow, meandering stream. It is only knee deep during most of the year at Tachilek and Mae Sai, and porters have for years smuggled Shan State opium across it into Thailand. Waters are sufficiently high during the rainy season to permit cross-border movement by pirogues, long and narrow native boats usually powered by outboard motors.

32. The Nam Mae Kok is the stream in Northwest Thailand most likely to be used by opium-carrying vessels. From headwaters in the Shan State it flows through the caravan transit town of Mong Hsat, then through rugged, heavily forested, and lightly peopled

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FIGURE 19. CIF opium pack train transiting a village in Northwest Thailand. These caravans, escorted by heavily armed guards, may include several hundred mules and small horses.

terrain before meandering into Thailand, through Chiang Rai, and on to the Mekong. The Fifth CIF Army has a camp at Ban Muang Ngam, a mile north of the Nam Mae Kok and about 3 miles from the border. Although small craft can negotiate the river between Mong Hsut and Ban Muang Ngam during most of the year, opium is not known to have been channeled through this section. Downriver from the CIF camp the stream is deeper and less encumbered with shoals and exposed rocks and is used by pirogues and bamboo rafts. Between Chiang Rai and the Mekong the river is navigable year-round by launches. Opium transported overland to Ban Muang Ngam could be moved on the Nam Mae Kok to downriver transshipment points or shipped all the way to the Mekong. There has also been some movement of opium from points in Burma down the Mekong and up the Nam Mae Kok, then into tributary streams below Chiang Rai from which it has been transferred to trucks for shipment to Mae Salong, Tham Ngop, or other points along Route 1.

33. The Ping and its western tributary the Nam Mae Taeng have their headwaters in the border mountains west of Fang. Although both are favorably aligned to be used for the southward movement of opium from the Shan State, the Nam Mae Taeng is not navigable and the Ping is navigable only a short distance north of Chiang Mai. The Ping, however, is heavily used by pirogues and launches south of Chiang Mai and, before construction of the Bhumiphol Dam north of Tak in the early 1960's, opium caravans traveling southward along the mountain ridges west of the Fang - Chiang Mai road transferred cargoes to boats south of Chiang Mai.

34. The Pai River, which flows westward to join the Salween in Burma, is a major cross-border route between Burma and Northwest Thailand. Its distance from the Shan State poppy fields and from the Northwest Thailand transshipment points, however, has limited its use as a route for opium smuggling into Thailand. As far as is known, it is not currently used for this purpose, but it has been an important route

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for the illicit movement of other commodities. Teak logs were formerly floated into Burma while gem stones from Shan State mines have been, and probably continue to be, shipped into Thailand. Movement on the river is usually by raft or pirogue, the latter as much as 40 feet long with capacities up to 20 people. Swift and turbulent currents preclude upriver movement during much of the rainy season.

35. The Nam Mae Yuam, with headwaters south of Mae Hong Son, is seasonally navigable by small craft from north of Mae Sariang to the Salween. Navigation is mostly by bamboo rafts, which measure up to 12 feet by 25 feet, have capacities up to 2,500 pounds, and are used primarily to carry rice. Unless current smuggling patterns drastically change, the Yuam, like the Pai, will remain unused by the opium traffickers.

36. The Salween slices through the Shan State, dividing it into two parts, and downstream forms the Burma-Thai border for about 75 miles. It is deeply incised for most of its length and is not fordable at any point by motor vehicle or animal. Movement of opium pack trains from growing areas west of the Salween to transshipment points to the east, therefore, must be channeled across the river either at the Ta-kaw bridge or at ferry crossings such as Wan Hsa-la. While ferries do cross the river at a number of points, other navigation is localized: turbulent currents and numerous rapids limit navigation to no more than a few miles by even shallow-draft vessels.

MAJOR CROSS-BORDER SMUGGLING ROUTES

37. Routes used by opium caravans from Burma into Thailand do not follow a single trail but rather a series of interconnecting trails, whose prime function is the handling of short-haul traffic between local towns and villages. Alignments of the opium routes are adjusted from one trip to the next in response to changes in trail conditions (for example, to higher ground during high water), changes in market and transshipment sites, and changes in focus of interdiction efforts along the border. Elaborate radio networks that cover the area from the insurgent bases in Northwest Thailand to the poppy-growing areas in the Shan State provide the opium caravans with advance warning of the whereabouts of Burmese Government (GUB) and RTG interdiction units as well as of competing opium armies. If a segment of a trail network is blocked, the route is adjusted to bypass that segment. With increased interdiction

pressure by the RTG and, hopefully, by the GUB, alignments can be expected to change more frequently.

38. A few routes have traditionally handled most of the opium traffic from Burma into Thailand. Chief among these has been the one that crosses the Nam Mae Sai from Tachilek to Mae Sai. Pressure by both the RTG and the GUB against opium smugglers in the past year, however, has reduced illicit cross-border movement at this point. Before the pressure was applied, substantial amounts of narcotics were carried by porters across the shallow stream, sometimes within a few hundred yards of the Tachilek - Mae Sai bridge, at other times about 3 miles east of the bridge. Porters either transferred their loads to trucks on the south bank of the river or carried it, skirting Mae Sai to the west or to the east, to a transfer point on Route 1 south of the town. Small amounts have also been transported across the bridge in packages carried by pedestrians or cyclists or hidden in official GUB vehicles (Figure 20). Although inhabitants living on both sides of the border are still permitted to cross the bridge, their packages are now subjected to a stringent search. Cross-border movement of opium cargoes at Tachilek - Mae Sai has not been limited to a southward direction: reports have indicated that opium from the CIF camp at Mae Salong has been transported by pack train and trucks through Mae Chan to Mae Sai, then across the river to Tachilek refineries. A CIF camp, with a suspected refinery nearby, is located in the rugged border hills several miles southwest of Mae Sai. A well-hidden trail paralleling Route 1 extends southward from the complex, joining the highway several miles to the south.

39. The Fifth CIF Army Headquarters at Mae Salong is located in rugged country about 20 miles west of Mae Chan and 2 or 3 miles east of the Burma-Thailand border. Associated camps and villages are scattered within a radius of several miles on both sides of the border. This complex has been the principal storage and transshipment area for Fifth Army opium shipments from Burma. Most pack trains have followed trails through Mong Hsut, moved along the valley of the Nam Mae Kok for several miles to a point where the valley becomes particularly heavily forested and inhospitable, then turned eastward into Thailand and followed mountain trails along the border to Mae Salong. Other pack trains have entered Thailand near Ban Pang Pa Klual on the border west

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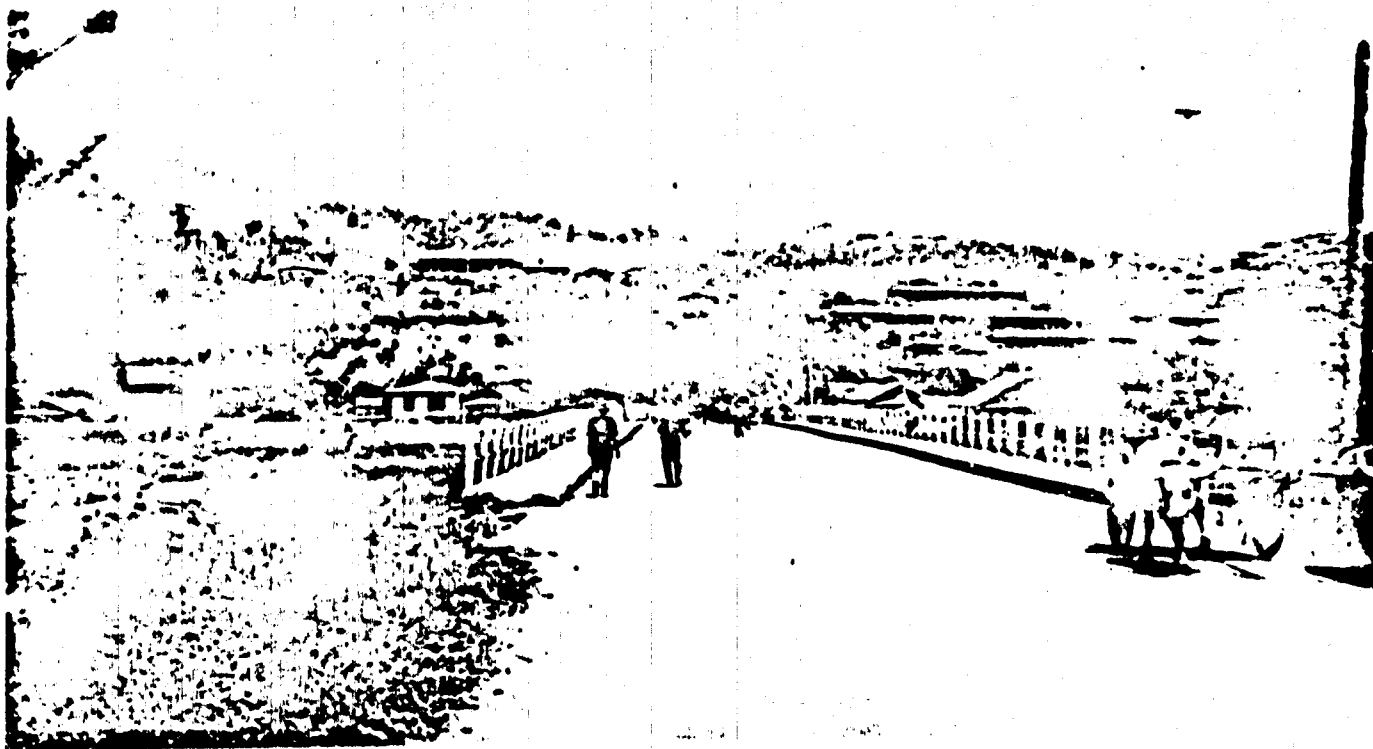


FIGURE 20. The Burma-Thailand border at Mae Sai. The bridge across the Mae Sai River has been a crossing point for illicit narcotics into Thailand. Porters have also carried narcotics across the river downstream from the bridge.

of the Nam Mae Kok, then followed along the Nam Mae Kok to Ban Muang Ngam and northeast to Mae Salong. From Mae Salong the opium, or its derivatives if refined at the camp, has been moved along trails by porters or pack animals, either eastward toward Route 1 or southward toward the Fifth Army camp at Ban Muang Ngam. Road conditions permitting, eastward-bound cargoes have been transferred to trucks at the roadhead several miles west of the highway. Pack trains moving southward have crossed the Nam Mae Kok near Ban Muang Ngam—on boats or rafts if the water is high—then continued southwestward towards the Tha Ton - Fang road.

40. The Tham Ngop area, on the western slope of a ridge about 8 miles west of the Tha Ton - Fang highway and only a mile or two inside Thailand, has been the major terminus for the opium caravans of both the Third CIF Army and the Kachin Independence Army (KIA). Most caravans have reached the Tham Ngop camps from Burma via a route that enters Thailand 30 miles to the west. (See fold-out block diagram, following text.) This route passes through Mong Pan in Burma, where a CIF camp is located, crosses the Salween by ferry, then enters Thailand through a pass in the border mountains that leads to the town of Ban Piang Luang,

about 2 miles inside the border. The Ban Piang Luang region has been a rest area for caravans continuing eastward to Tham Ngop or southward into the Nam Mae Taeng valley.

41. Opium cargoes of the Shan United Revolutionary Army (SURA) may be transferred from pack trains arriving from the Shan State to CIF caravans for the final leg of the journey to Tham Ngop. (SURA has a camp on the northern outskirts of Ban Piang Luang; the Third CIF Army has installations about 3 miles to the northwest and 4 to 5 miles to the northeast.) From Ban Piang Luang, it is a 3-day journey along trails to Tham Ngop; from there, it is a half-day trip by trail to the Fang - Chiang Mai highway. Illicit cargoes have usually been transferred from porters or pack animals to motor vehicles at a roadhead a few miles west of the highway.

42. While most Tham Ngop-bound caravans have used the Ban Piang Luang route, others have moved down trails from the north, probably crossing the Salween at Wan Hsa-la and traversing a fair-weather road through Mong Ton. This road degenerates into a trail as it enters the heavily forested and lightly populated limestone valley south of Mong Ton. Caravans have moved eastward at this point and followed trails through less difficult terrain, entering Thailand well to the north of Tham Ngop.

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43. Pack trains entering Thailand at Ban Piang Luang, instead of turning eastward to Tham Ngop, may continue southward along a trail through the narrow valley of the Nam Mae Tueng. Opium harvested from northern Mae Hong Son Province and from hills flanking the valley is also shipped along this route. Some opium has been processed at refineries run by the Third CIF Army, SUKA, and others at isolated locations along the route. Caravans have several options. They may transit the entire length of the valley and load their cargoes onto trucks on the Fang - Chiang Mai highway near Mae Taeng or, during dry weather, at a roadhead at Ban Sop Kai, about 15 miles from the highway. They may leave the valley near Ban Muang Haeng, traverse trails across the mountains to the east, and transfer cargoes to trucks north of Chiang Dao. (The area of the Chiang Dao caves, about 4 miles north of the town, is known to be one such transfer point.) Finally, caravans may

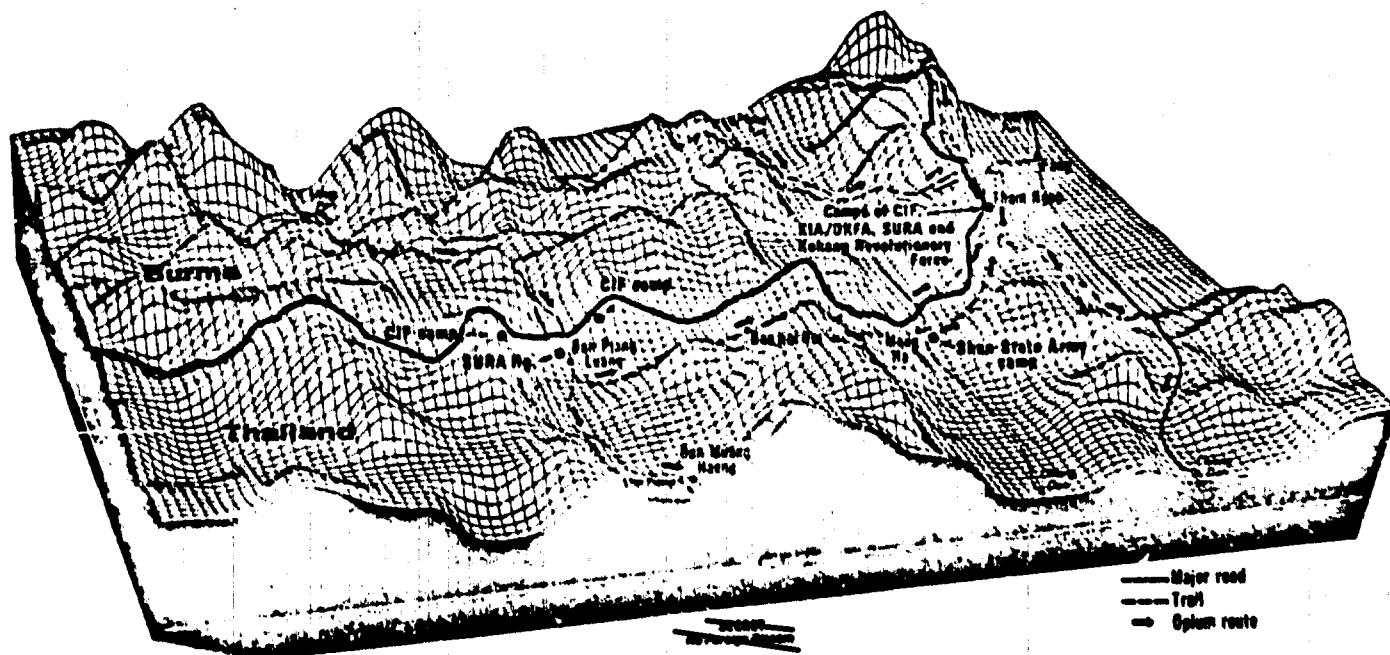
leave the Nam Mae Taeng trail at Ban Sop Kai, fork to the right and follow a trail and fair-weather road southward to the Pai - Mae Mulai road.

44. Opium caravans entering Mae Hong Son Province through passes west of Ban Piang Luang can move southeastward along the fair-weather road that links Mae Hong Son with Pai and the Fang - Chiang Mai highway at Mae Mulai. The area from Mae Hong Son north to the border is a major poppy growing area, and its opium harvest may also be exported along this route. Cargoes can be transferred to trucks in the Pai area during dry weather; during rainy weather, however, pack trains probably have to carry the opium most of the way to Mae Mulai. Recent intelligence reports indicate that small pack trains have carried opium from the area west of Pai towards the Fang - Chiang Mai highway, not along the road but cross-country through the hills well to the south of it.

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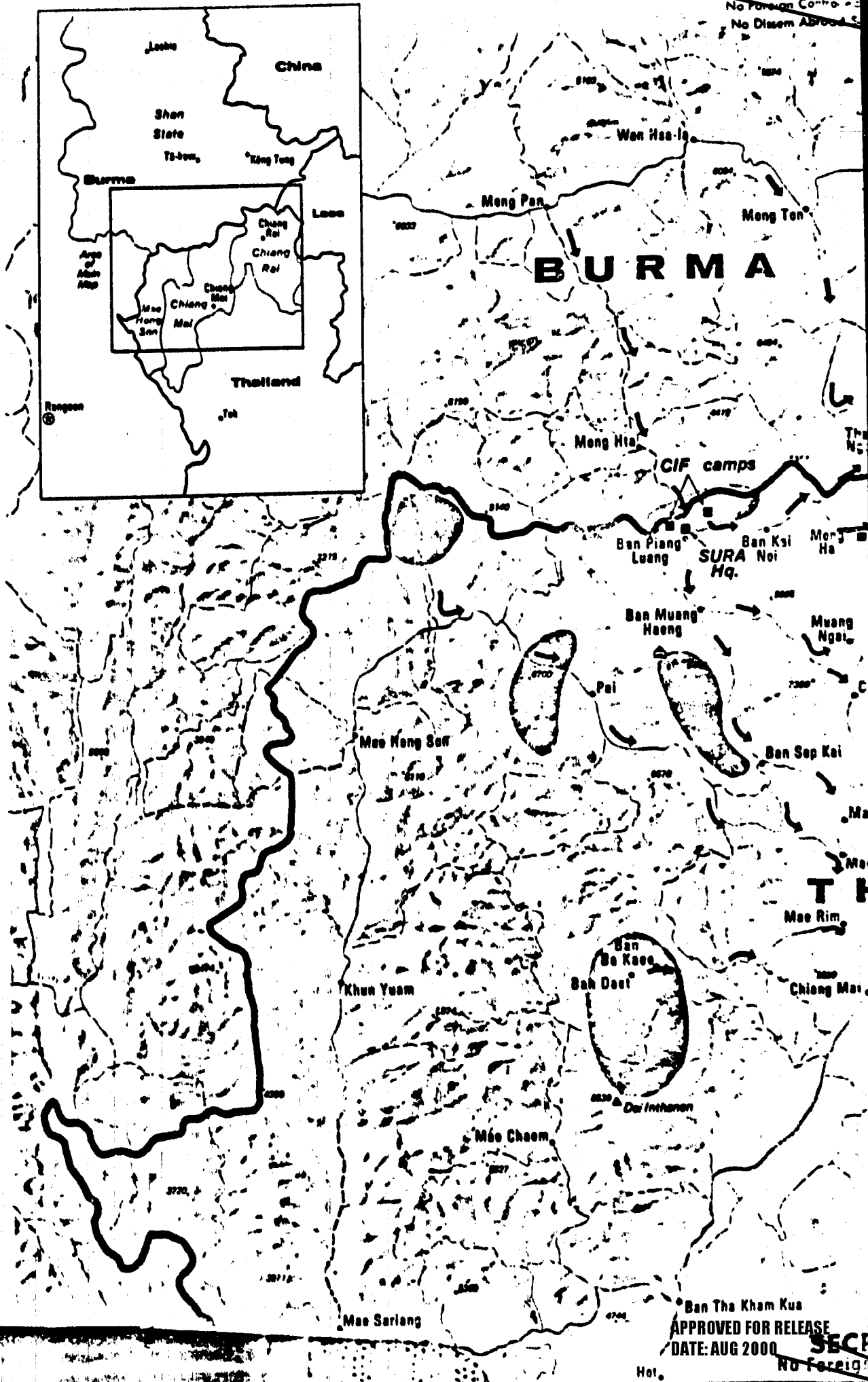
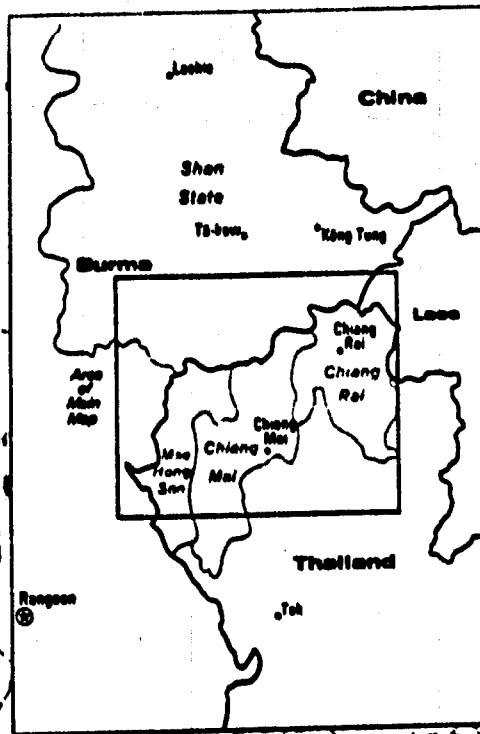
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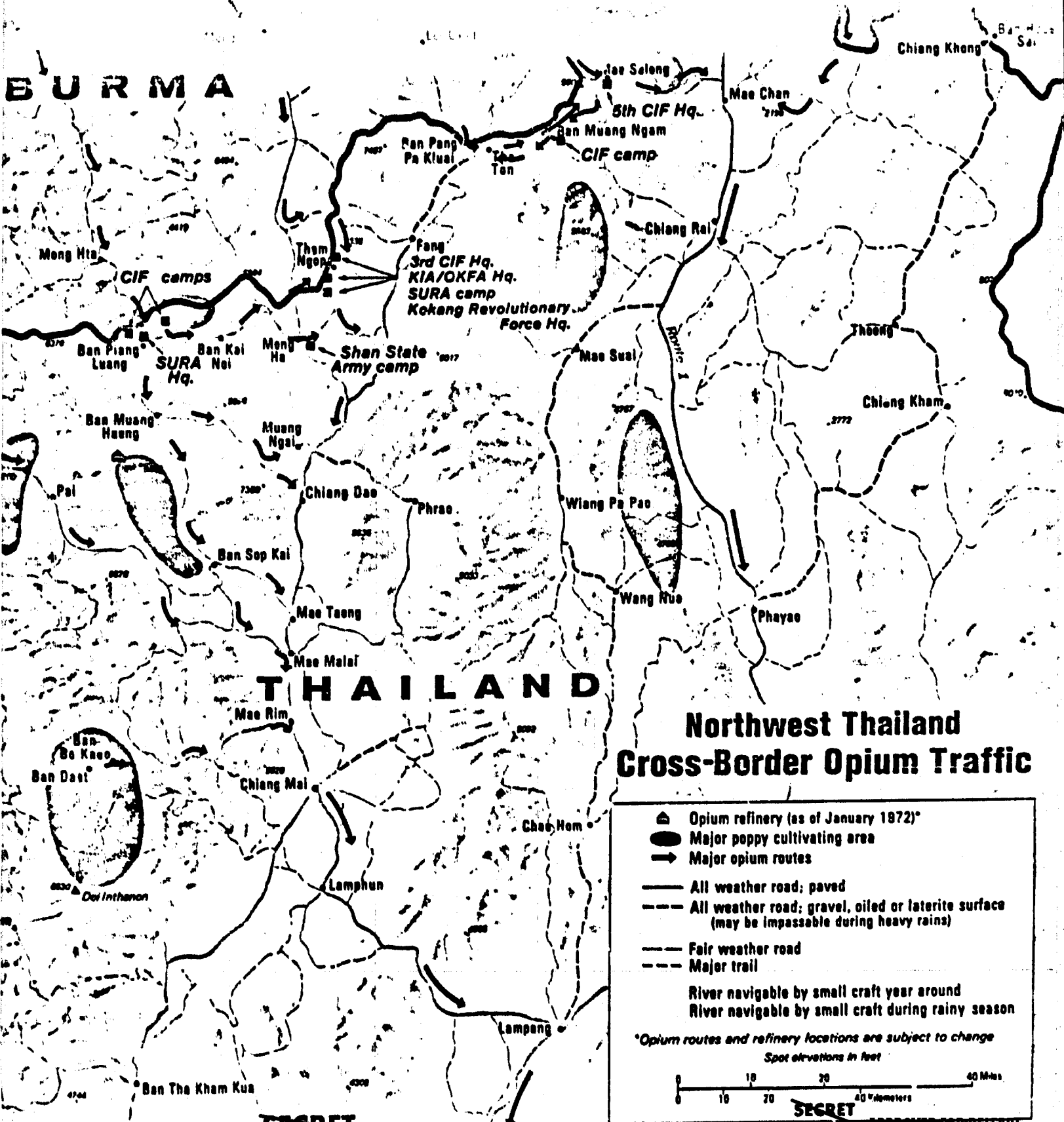
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BURMA



Northwest Thailand Cross-Border Opium Traffic

Opium refinery (as of January 1972)*

Major poppy cultivating area

Major opium routes

All weather road; paved

All weather road; gravel, oiled or laterite surface (may be impassable during heavy rains)

Fair weather road

Major trail

River navigable by small craft year around

River navigable by small craft during rainy season

*Opium routes and refinery locations are subject to change

Spot elevations in feet

0 10 20 40 Miles

0 10 20 40 Kilometers

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